Department of Energy

Ohio Field Office
Fernald Closure Project
175 Tri-County Parkway
Springdale, Ohio 45246
(513) 648-3155

DEC 7 2004

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0080-05

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF RESPONSES TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT AREA 9, PHASE III ABANDONED OUTFALL LINE EXCAVATION PLAN– PART THREE

References: 1) Letter, J. Saric to J. Reising, "A9 P3 AOL Part 3," dated November 15, 2004

2) Letter, T. Schneider to W. Taylor, "Disapproval - A9PIII AOL Excavation Plan Part Three," dated November 17, 2004

Enclosed for your review and approval are responses to the Ohio Environmental Protection Agency comments on the draft Area 9, Phase III (A9PIII) Abandoned Outfall Line Excavation Plan – Part Three. This plan was approved by the United States. Environmental Protection Agency (USEPA) as noted in Reference 1. These comment responses are in response to Reference 2 above and will be included in the final plan.

If you have any questions or require additional information, please contact Johnny Reising at (513) 648-3139.

Sincerely,

William J. Taylor
Director

FCP:Reising

Enclosure: As Stated

cc w/enclosure:
D. Pfister, OH/FCP
J. Reising, OH/FCP
T. Schneider, OEPA-Dayton (three copies of enclosure)
G. Jablonowski, USEPA-V, SR-6J
F. Bell, ATSDR
M. Cullerton, Tetra Tech
M. Shupe, HSI GeoTrans
R. Vandegrift, ODH
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosure:
R. Abitz, Fluor Fernald, Inc./MS64
K. Alkema, Fluor Fernald, Inc./MS01
L. Barlow, Fluor Fernald, Inc./MS52-3
J. Chiou, Fluor Fernald, Inc./MS64
M. Frank, Fluor Fernald, Inc./MS64
F. Johnston, Fluor Fernald, Inc./MS52-5
U. Kumthekar, Fluor Fernald, Inc./MS64
S. Lorenz, Fluor Fernald, Inc./MS52-3
E. Lupton, Fluor Fernald, Inc./MS64
J. McCormack, Fluor Fernald, Inc./MS17
F. Miller, Fluor Fernald, Inc./MS64
C. Murphy, Fluor Fernald, Inc./MS01
D. Nixon, Fluor Fernald, Inc./MS01
D. Powell, Fluor Fernald, Inc./MS64
T. Snider, Fluor Fernald, Inc./MS64
B. Zebick, Fluor Fernald, Inc./MS60
ECDC, Fluor Fernald, Inc./MS52-7

RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT AREA 9, PHASE III ABANDONED OUTFALL LINE EXCAVATION PLAN – PART THREE

FERNALD CLOSURE PROJECT
FERNALD, OHIO

DECEMBER 2004

U.S. DEPARTMENT OF ENERGY

RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT AREA 9, PHASE III ABANDONED OUTFALL LINE – PART THREE (21140-PL-0004, REVISION A)

COMMENTS

1. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.3.4 Pg #: 3-7 Line #: 10-12 Code: C
Original Comment #: 1
Comment: This section should state that certification samples will be taken after the above-FRL soil is removed, and before disturbing the soil to remove the pipeline.

Response: Agree.

Action: The text in Section 3.3.4 will be changed to indicate that certification samples will be collected after the above-final remediation level (FRL) soil is removed, but before excavating the abandoned outfall line (AOL) in the vicinity of Manhole (MH) 181A.

2. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.3.6.1 Pg #: 3-9 Line #: 20-22 Code: C
Original Comment #: 2
Comment: It is expected that when DOE submits an excavation plan, that the plan be complete. Please include all details for the open trench removal under the Mid Valley pipeline, which, as referenced in this section, would include the requirements from Mid Valley.

Response: Agree. Details of the removal of the AOL under the Mid Valley crude oil pipeline will be added to the Excavation Plan.

Action: Section 3.3.6 of the Excavation Plan will be rewritten to include the details for removing the AOL from under Mid Valley Crude Oil Pipeline by the open trench method (see Attachment A of these comment responses for revised text). Discussions of the removal of the AOL under the Mid Valley crude oil pipeline through the installation of an encasement pipe will be removed from the document.

3. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.3.6.2 Pg #: 3-10 Line #: 6-12 Code: C
Original Comment #: 3
Comment: No mention is made as to what will be done to remove the soil if a crack is found in the pipe after removing it. Please provide details on how the soil will be removed, and the appropriate biased sampling (as done elsewhere when a crack in the pipe is found) will be performed.

Response: Agree. The AOL underneath the Mid Valley crude oil pipeline will be removed by the open trench method; therefore, Section 3.3.6.2 will be removed from the document. Certification activities associated with the excavation of this section of the AOL will be consistent with the approach that has been used to remove the rest of the AOL.

Action: Section 3.3.6.2 will be deleted from the document.

4. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.3.6.2 Pg #: 3-10 Line #: 4-12 Code: C
Original Comment #: 4
Comment: Sentences 4-6 state that the soil and pipe bedding material located "adjacent" to the AOL, underneath the MVOL, was statistically sampled and tested to meet certification FRLs. However, the paragraph explains once the AOL is removed, the material under the AOL will be left in place. The material underneath the AOL must be sampled and DOE must provide certification results to show it is below the off-property FRL, before any material can be left in place.

Response: Agree. The AOL underneath the Mid Valley crude oil pipeline will be removed by the open trench method, therefore, Section 3.3.6.2 will be deleted from the document. Certification activities associated with the excavation of this section of the AOL will be consistent with the approach that has been used to remove the rest of the AOL by open trench method.

Action: Section 3.3.6.2 will be deleted from the document.

5. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.3.7 Pg #: 3-10 Line #: 27-28 Code: C
Original Comment #: 5
Comment: This section states that the superficial fill material located between the pipe and the casing will be removed. Please provide details on how this superficial fill will be removed.

Response: Agree. Details of the removal of the superficial fill material between the pipe and the casing will be added to the Excavation Plan.

Action: Section 3.3.7 of the Excavation Plan will be revised to reflect casing pipe method for removal of the AOL under State Route 128 and to provide additional detail. In addition, a new drawing (99X-5500-G-00822 – Area 9, Phase III Remediation of Abandoned Outfall Line Pipe Removal Under St. Rt. 128) will be added to the construction drawings that will also reflect the casing pipe method for removal of the AOL under State Route 128 (see Attachment B to these comment responses for revised Section 3.3.7 and additional drawing).

6. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.3.7 Pg #: 3-10 Line #: 32-34 Code: C
Original Comment #: 6
Comment: Please provide details on how 100% contamination surveys will be performed by rad control in the 40-foot section of pipe under 128.

Response: Radiological controls personnel will perform a radiological survey by direct scan of the outside of the AOL as it is being removed and inside of the existing encasement pipe in-place after the AOL has been removed (see Appendix D for details). If any contamination is detected above the free release limits, the existing encasement pipe will be removed for proper disposal.

Action: The text in Section 3.3.7 will be updated to include a more detailed description of how the contamination survey will be performed and the referenced e-mail will be added as an appendix to the Excavation Plan (see Attachment B).

7. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.3.10 Pg #: 3-12 Line #: 5-7 Code: C
Original Comment #: 7
Comment: This section does not specify the certification samples being taken before the trench is backfilled. Please correct.

Response: Agree. However, the references to the collection of certification samples after the areas have been excavated are discussed in Section 3.3.4; however, these references are vague. Therefore, Section 3.3.4 will be updated to better explain the collection of certification samples.

Action: A new paragraph will be insert into Section 3.3.4 just before the last paragraph that will state:

"Once this material has been excavated, certification samples will be taken to verify that all above-FRL material has been removed. Excavation of the AOL will not proceed in the vicinity of MH 181A until the certification sample results have been evaluated. If certification sample results confirm that contaminated materials have been successfully removed from the area around the excavation of MH 181A, then the excavation of the AOL can proceed through this area."

8. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.3.10 Pg #: 3-12 Line #: 16-17 Code: C
Original Comment #: 8
Comment: Once again, please provide details of Mid Valley Pipeline Company's requirements for this project, in this case compaction requirements.

Response: Agree. See the Response for Comment #2.

Action: No action.

9. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: 3.4 Pg #: 3-13 Line #: 29 Code: C
Original Comment #: 9
Comment: This section references the CDL for A9PIII – Part 3. This document has not been submitted to the agencies.

Response: The Certification Design Letter for Area 9, Phase III – Part 3 was submitted to the agencies on November 10, 2004.

Action: No action required.

10. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: Drawings Pg #: G-1 Note #: 13 Code: C
Original Comment #: 10
Comment: Construction Note #13 is incorrect and does not match with the current text in the A9P3 AOL Excavation Plan. Please correct and update the appropriate drawings and text to correspond with the current submittal.

Response: Agree. The scope to remove the AOL from under the Mid Valley Pipeline is included as part of Part Three remediation, therefore, Construction Note #13 is invalid and will be deleted from drawing.

Action: Delete Note 13 from drawing 99X-5500-G-00775.

11. Commenting Organization: Ohio EPA Commenter: OFFO
Section #: Drawings Pg #: G-10 Note #: 1 Code: C
Original Comment #: 11

Comment: This note under this Removal of AOL Under SR 128 states that the steel casing pipe, which is to be left in place will be extended to the ODOT right-of-way. This is not mentioned in the Excavation Plan. Please explain the reasoning behind this and provide details in the plan on how this will be accomplished.

Response: The method for removing the pipe under State Route 128 has been revised making the detail on drawing 99X-5500-G-00809 (sheet G-10) obsolete. Both the text in the Excavation Plan and the drawings will be revised to reflect this revised method.

Action: Section 3.3.7 of the Excavation Plan will be revised to reflect the casing pipe method for removal of the AOL under State Route 128. In addition, a new drawing (99X-5500-G-00822 - Area 9, Phase III Remediation of Abandoned Outfall Line Pipe Removal Under St. Rt. 128) will be added to the construction drawing package that also will reflect the revised methodology for removal of the AOL under State Route 128 (see Attachment B to these comment responses for modified text). The detail on drawing 99X-5500-G-00809 (sheet G-10) will be deleted.

ATTACHMENT A

INSERT: A9PIII AOL EXCAVATION PLAN PART THREE, REVISED SECTION 3.3.6

3.3.6 Open Trench Method for Removal of Pipe Under Mid Valley Crude Oil Pipeline

The plan for remediation of the portion of the abandoned outfall line (AOL) under the Mid Valley crude oil pipeline is to remove it by open trench excavation method (see Figure 3-3). Open trench excavation will be performed in accordance with the Mid Valley Pipeline Company requirements, including supporting the existing crude oil pipeline during excavation, excavation methodology, and backfilling requirements.

The following is the excavation approach for removal of AOL under the Mid Valley crude oil pipeline by open trench method:

a. Obtain approval from Mid Valley crude oil pipeline for removal of the AOL by open trench method (refer to Appendix C for correspondence with Mid Valley Pipeline Company).

b. Notify Mid Valley Pipeline Company prior to performing any excavation within the Mid Valley crude oil pipeline Right-of-Way (ROW).

c. Prepare Penetration Permit for excavation within Mid Valley crude oil pipeline ROW.

d. Install erosion and sediment controls before start of excavation as specified in the technical specifications.

e. Manage construction water during excavation as described in Section 3.3.9.

f. Restrict equipment crossing at Mid Valley crude oil pipeline. Heavy equipment will not cross the Mid Valley crude oil pipeline except at the access ramp constructed earlier during performance of Abandoned Outfall Line Excavation Plan Part One unless otherwise approved by Mid Valley Pipeline Company.

g. Remove overburden soil (varies approximately from 18 to 30 inches over Mid Valley crude oil pipeline) above the Mid Valley crude oil pipeline within 3 to 5 feet laterally north and south of the AOL crossing as per the special requirements of the Penetration Permit in the presence of a Mid Valley Pipeline Company representative. See drawing 99X-5500-G-00797 for profile of existing cover over the Mid Valley crude oil pipeline.

h. To meet the Mid Valley Pipeline's requirements that no more than 20 feet of the exposed Mid Valley crude oil pipeline will be spanning the AOL trench crossing, the trench width under the Mid Valley crude oil pipeline will not exceed 15 feet.

i. After Mid Valley crude oil pipeline is exposed, hand excavate approximately 1 foot under the exposed Mid Valley crude oil pipeline for approximately 3 to 5 feet laterally north and south of AOL crossing to install rigging straps around the Mid Valley crude oil pipeline.

j. Hold Mid Valley crude oil pipeline in place by use of rigging straps and construction equipment or by other method approved by the Construction Manager, unless otherwise waived by the Mid Valley Pipeline Company representative.

k. After the Mid Valley crude oil pipeline is held in place, excavate and remove the AOL east of the Mid Valley crude oil pipeline crossing. After real-time monitoring and certification sampling is performed, backfill the trench as per the typical trench detail shown on construction drawing to within 2 feet under the Mid Valley crude oil pipeline.

l. After removal of AOL east of Mid Valley crude oil pipeline crossing, excavate AOL west of the Mid Valley pipeline crossing and the existing Manhole SMH 177A. After real-time monitoring and certification sampling is performed, backfill the manhole excavation and trench as per typical trench detail shown on construction drawing to within 2 feet under the Mid Valley crude oil pipeline.

m. After trench backfill is completed to within 2 feet under the Mid Valley Pipeline, backfill remaining trench below the Mid Valley crude oil pipeline with sand to 1 foot above the Mid Valley crude oil pipeline.

n. Place 2 feet +/- of topsoil as described in this section and as shown on the typical trench detail. Grade to match adjacent existing grade.

o. Perform restoration as described in this section.

p. Excavated AOL including pipe and impacted soil will be hauled to SP-7 for stockpiling in accordance with Section 3.3.4.

APPENDIX C - Page 1 of 2 5771

arsdale, Chuck

m: Vanarsdale, Chuck
t: Friday, November 05, 2004 10:25 AM
Kumthekar, Uday; McCormack, John; Neumann, Christopher; Snider, Anthony; Johnson, Gregg
: Vanarsdale, Chuck
ubject: AOL under MidVAlley pipeline

entlemen:

spoke to Dan Harden of MidValley pipeline today, 11/5/04. He stated
iat either Option of removing the pipeline described in an e-mail sent
1 10/26/04 is acceptable. Option 1 is the open trench method and
ption 2 is jacking a pipe around the existing 16" pipe. I told
idValley that Fluor Fernald prefers the open trench method to remove
ie pipe under the MidValley pipeline. He requests that we notify him
: least one week in advance prior to performing any work. A
epresentative of MidValley pipeline will be present during the
xcavation and pipe removal.

iuck Van Arsdale

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Page 2 of 2

sdale, Chuck

Vanarsdale, Chuck
Tuesday, October 26, 2004 2:50 PM
Ed Harden (E-mail)
Kumthekar, Uday; McCormack, John; Neumann, Christopher; Snider, Anthony; Vanarsdale, Chuck; Johnson, Gregg
bject: Pipe extraction under MidValley pipeline

Mr. Harden,

After further review of the abandoned outfall line pipe removal under the MidValley pipeline, we have determined that two methods are the most feasible.

OPTION 1:

An open trench will be excavated on each side of the MidValley pipeline. The trench will be 5 feet wide at the bottom and approx. 15 foot wide at the top of the trench. Fluor Fernald will contact MidValley pipeline prior to any excavation near the MidValley pipeline. The earth will be removed above the pipe by mechanical means to within 1 foot of the the top of pipeline. The MidValley pipeline will be exposed by hand tools to remove all overburden soil in the presence of a MidValley pipeline representative. The abandoned outfall line is approximately 7 to 10 feet below the MidValley pipeline. Fluor Fernald anticipates using an excavator with a 5 foot width bucket to remove the abandoned outfall line, and backfill the trench. The excavator will have sufficient arm length to reach the abandoned outfall line under the MidValley pipeline and remain a safe distance away from the MidValley pipeline. If required, Fluor Fernald can support the exposed MidValley pipeline in the trench by placing a steel beam on the existing ground at the top of the trench directly above the MidValley pipeline. The pipe can be supported by rigging straps around the MidValley pipe line and tieing it off around the steel beam.

A similar option was used when the permanent outfall line was installed in the early 1990s.

OPTION 2:

A contractor will hammer a 30" steel casing through the soil around the 16" abandoned outfall line. Approximately 70 linear feet of casing is proposed to be hammered around the abandoned outfall line. This would require excavating a pit approximately 10 foot wide by 36 feet long to allow space for the hammer machine and a 6 foot wide by 6 foot long receiving pit on the other side. The depth of the pit would be approximatley 15 foot deep. These pits would be approx. 40 feet east and west of the MidValley pipeline crossing. Once the 30" steel pipe is hammered from one end to the other, the abandoned outfall line shall be removed from the inside of the new 30" casing. If required, the 30" casing will be grouted shut, equipment removed, and the pits backfilled.

This option allows little or no contact with the MidValley pipeline. The vibrations from the hammer may need to be considered.

When you return from your travels, please contact us, so we can discuss further.

Chuck Van Arsdale
Fluor Fernald
513-648-5116

ATTACHMENT B

INSERT: A9PIII AOL EXCAVATION PLAN PART THREE, REVISED SECTION 3.3.7

3.3.7 Excavation Method for Removal of Pipe Under State Route 128 by Installation of Casing Pipe

Excavation method selected for removal of abandoned outfall line (AOL) 16-inch pipe under the State Route (SR) 128 is by installation of 54-inch casing pipe (refer to construction drawing No. 99X-5500-G-00822). Following is the excavation approach:

CONSTRUCTION ACTIVITIES BEFORE PIPE REMOVAL

Before removal of AOL 16-inch pipe under SR 128 perform following construction activities:

a. Revise AOL Excavation Plan Part Three Traveler to include scope of work related to the removal of AOL pipe under the SR 128 by installation of casing pipe.

b. Review and approve Safe Work Plan prepared by the casing pipe Subcontractor (hereafter called as "Subcontractor") for installation of 54-inch casing pipe.

c. Contact "OUPS" for locating existing utilities within the construction area.

d. Notify Ohio Department of Transportation (DOT) and utility companies before start of construction activities.

e. Install traffic control signs conforming to Ohio DOT requirements.

f. Install "Jersey Barrier" east and west of SR 128 pipe crossing as per Ohio DOT requirements.

g. Install construction safety fence and radiological fence as shown on the construction drawing.

h. Install erosion and sediment controls as specified in technical specifications.

i. Review technical submittals prepared by Subcontractor for casing pipe, pipe joints, and pipe welding before procurement of the casing pipe material.

j. Procure and deliver 54-inch casing pipe (steel pipe, wall thickness 0.625-inch) and associated accessories to the project site (by Subcontractor).

k. Remove AOL 16-inch cast iron pipe east and west of SR 128 pipe crossing up to the limits of proposed 54-inch casing pipe and haul to the on-site stockpile SP-7. Plug/grout east and west ends of the remaining 16-inch pipe under SR 128. Survey location and bottom elevation of AOL 16-inch pipe at both ends.

l. Perform radiological survey, precertification sampling, and certification sampling during removal of pipe.

m. Excavate equipment (main pit) and receiving pits at east and west of the SR 128 with stable side slopes. Minimum pit sizes and pit bottom elevations will be as required by the Subcontractor. Pits will be excavated to meet safety requirements for the personnel access.

n. Stabilize pit bottoms with crushed rock.

o. Manage construction water during excavation as described in this Section 3.3.9.

p. Prepare SR 128 side slopes for jacking/ramming of 54-inch casing pipe as required by the Subcontractor.

ALTERNATIVES FOR PIPE REMOVAL

Alternatives for removal of AOL 16-inch pipe are based on two possible field conditions:

1. **ALTERNATIVE 1** - Removal of AOL 16-inch pipe if the annular space between the existing AOL 16-inch pipe and 26-inch steel/24-inch vitrified clay (VC) encasement pipe is not grouted and is open.

2. **ALTERNATIVE 2** - Removal of 26-inch steel/24-inch VC encasement pipe and AOL 16-inch pipe if the annular space between the existing AOL 16-inch pipe and 26-inch steel/24-inch VC encasement pipe is grouted.

ALTERNATIVE 1 - REMOVAL OF AOL 16-INCH PIPE UNDER SR 128

Basis: Alternative 1 is based on possible field condition that the annular space between AOL 16-inch pipe and 26-inch steel/24-inch VC encasement pipe is NOT grouted and is open. Under this alternative, activities related to the removal of AOL 16-inch pipe would be as follows:

a. Mobilize and set-up pipe jacking/ramming equipment in the main pit (by Subcontractor) and perform safety check (by Subcontractor and Fluor Fernald).

b. Jack/ram 54-inch casing pipe (approximately 90 LF) around 26-inch steel pipe/24-inch VC pipe encasement under SR 128 (by Subcontractor). Periodically check casing pipe alignment and elevation during jacking/ramming of 54-inch pipe (to be performed by Subcontractor). Set the 54-inch casing pipe approximately 14 inches below the bottom of AOL 16-inch pipe.

c. After completion of jacking/ramming of 54-inch casing pipe, perform radiological survey at the end of 54-inch casing pipe in the receiving pit.

d. Remove the soil between the 16-inch pipe and 54-inch pipe at both ends to approximate length of 6 to 8 feet and haul to on-site stockpile SP-7. Do not stockpile soil removed in the pit area outside the 54-inch casing pipe. Control the spread of contamination during removal, loading and hauling of soil. This activity will require appropriate PPE and confined entry space permit. First remove soil on top of 16-inch pipe inside the 54-inch pipe. During the soil removal, if AOL pipe joints are found outside the encasement pipe, remove the AOL pipe segment outside the encasement pipe before removing the underlying soil. Perform radiological survey and collect soil samples for certification sampling during the soil removal activity. Contain lead seals from joints.

e. Perform radiological survey of outside surface of pipe length removed from encasement pipe. If any radiological contamination is detected above the free release limits on the outside of the removed sections of AOL, then the 26-inch steel/24-inch VC encasement pipes will also be removed.

f. Unplug 16-inch AOL pipe and insert 9 to 12-inch SDR 11 HDPE pipe. Before inserting HDPE pipe, plug both ends of HDPE pipe. During insertion of HDPE pipe, lay HDPE liner in front and under the AOL 16-inch pipe outlet/inlet to collect sediment, if any, from the AOL pipe. Perform radiological survey and haul collected sediment to on-site stockpile SP-7.

g. After inserting HDPE pipe unplug both ends of HDPE pipe. After unplugging ends, Subcontractor shall insert threaded shaft through the entire length of HDPE pipe by screwing one shaft segment (approximately 13 feet in length) to the next segment. Install end steel plate (approximately same dimension as CI pipe bell ID) at the end of the threaded shaft before pulling operation.

h. With hydraulic pull equipment in main pit, pull 16-inch pipe from the encasement pipe and haul to on-site stockpile SP-7 (by Subcontractor). Based on the existing drawing it is assumed that the encasement pipe is not grouted with concrete or sand. During the pulling operation, cut HDPE pipe length and remove threaded shaft lengths, as required. Perform radiological survey of outside surface of the 16-inch pipe and shaft lengths removed. If any radiological contamination is detected above the free release limits on the outside of the removed sections of AOL, then the 26-inch steel/24-inch VC encasement pipes will also be removed.

i. After removal of 16-inch pipe and soil in 54-inch casing pipe up to both ends of 26-inch encasement pipe, clean 26-inch encasement pipe and perform radiological survey of the inner surface of the 26-inch encasement pipe. Also collect soil samples for certification sampling during the soil removal activity and haul soil to on-site stockpile SP-7.

j. If both the inside of the 26-inch steel/24-inch VC encasement pipes and the outside of outside of the removed sections of AOL from within the encasement pipe pass the "free release" criteria as described in this Excavation Plan, the encasement pipes will be grouted with concrete.

k. If either the inside of the 26-inch steel/24-inch VC encasement pipes or the outside of the removed sections of AOL from within the encasement pipe fail the "free release" criteria, the encasement pipe will be removed from the 54-inch casing pipe and hauled to on-site stockpile SP-7 for subsequent off-site disposition. If it is determined that the encasement pipes are to be removed, the Subcontractor will jack/ram or push/pull 26-inch steel/24-inch VC encasement pipes.

l. If 26-inch encasement pipe is removed, remove soil inside 54-inch casing pipe (soil between 26-inch encasement pipe and 54-inch casing pipe) and haul to on-site stockpile SP-7. Collect soil samples for certification sampling at representative spacing during the soil removal activity. After removal of soil, perform radiological survey of inner surface of the 54-inch casing pipe.

m. Grout both ends of 54-inch casing pipe and backfill within SR 128 right-of-way in accordance with Item 203 of State of Ohio DOT Construction and Material Specifications. If wall thickness of the casing pipe is less than 0.5-inch, grout entire length of the casing pipe under SR 128.

n. Perform restoration as described in this section.

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ALTERNATIVE 2 - REMOVAL OF 26-INCH STEEL/24-INCH VCP ENCASEMENT AND AOL 16-INCH PIPE UNDER SR 128

Basis: Alternative 2 is based on possible field condition that the annular space between the existing AOL 16-inch pipe and 26-inch steel/24-inch VC encasement pipe is grouted. Under this alternative, activities related to the removal of AOL 16-inch pipe and 26-inch steel/24-inch VC encasement pipe will be as follows:

a. Perform activities a. through e. described in Alternative 1 above.

b. Mobilize and set up equipment in the main pit (by Subcontractor) to push out 26-inch encasement/AOL 16-inch pipe. Prepare main pit as required by the Subcontractor before set-up of pipe pushing equipment. Perform safety check (by Subcontractor and Fluor Fernald).

c. Push-out 26-inch encasement/AOL 16-inch pipe together from the main pit (by Subcontractor) and haul to on-site Stockpile SP-7. Place HDPE liner on the receiving pit bottom at the opposite end of 54-inch casing pipe to receive pushed out pipe and to control spread of contamination.

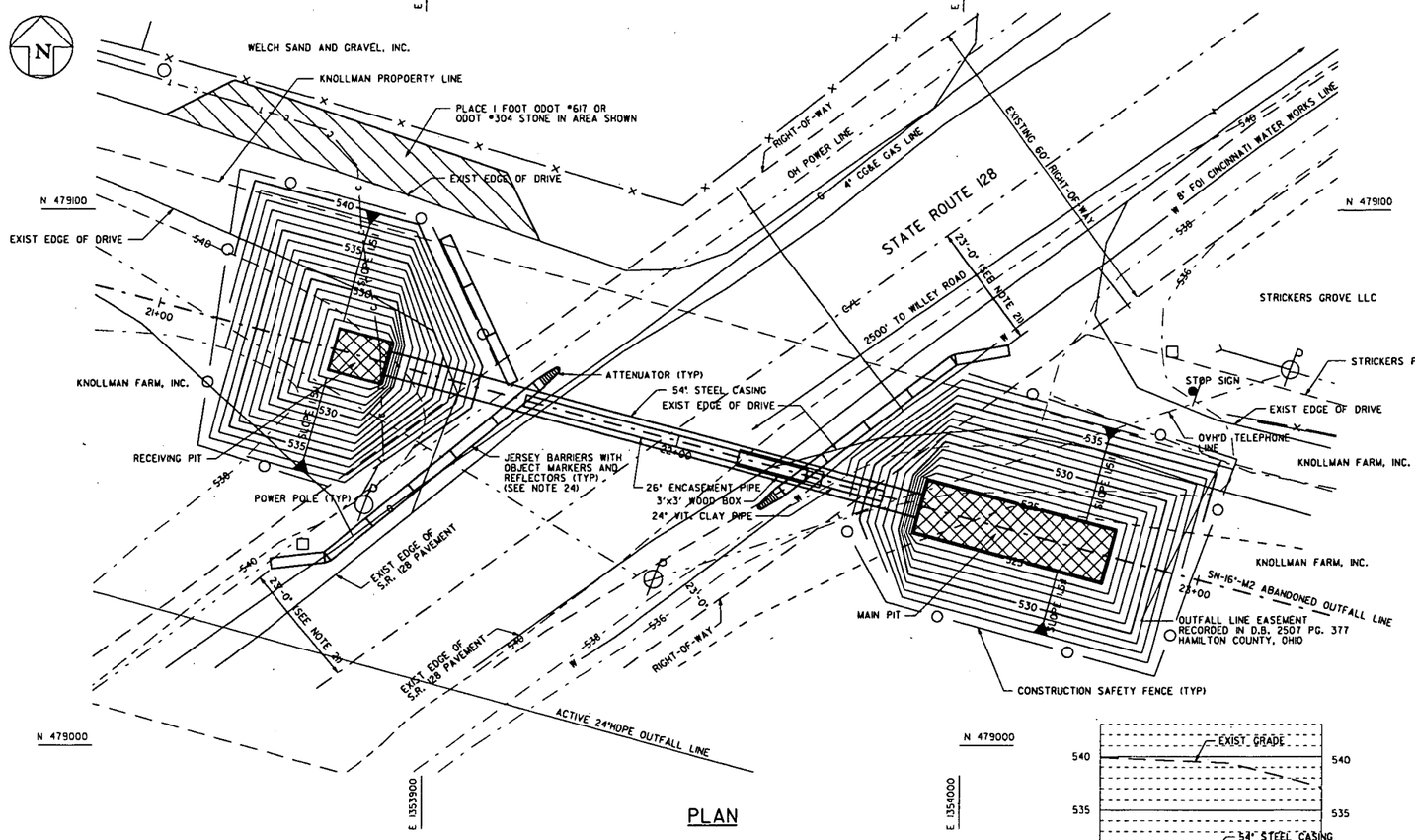
d. Remove soil from 54-inch casing pipe and haul to on-site stockpile SP-7. Collect soil samples for certification sampling at representative spacing during the soil removal activity. After removal of soil, perform radiological survey of inner surface of the 54-inch casing pipe.

e. After removal of soil, perform radiological survey of inner surface of the 54-inch casing pipe.

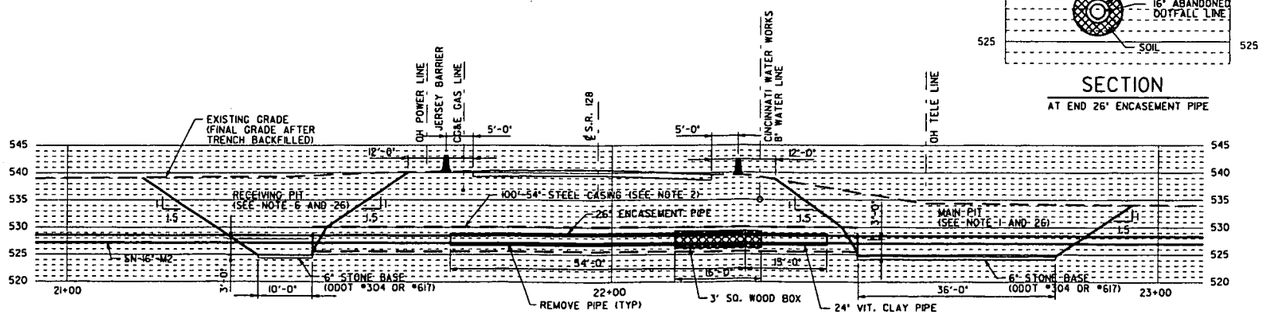
f. Grout both ends of 54-inch casing pipe and backfill within SR 128 right-of-way in accordance with Item 203 of State of Ohio DOT Construction and Material Specifications. If wall thickness of the casing pipe is less than 0.5-inch, grout entire length of the casing pipe under SR 128.

g. Perform restoration as described in this section.

CROSBY TOWNSHIP, HAMILTON COUNTY, OHIO



PLAN

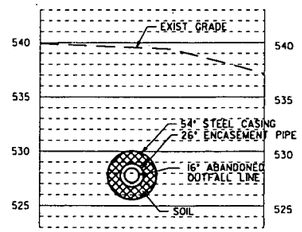


PROFILE

SCALE: 1"=10'

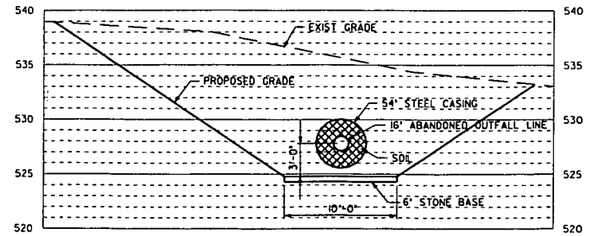
0 5 10 25 50

SCALE IN FEET



SECTION

AT END 26" ENCASEMENT PIPE



SECTION

AT BEGINNING 54" STEEL CASING

GENERAL NOTES

1. THE MAIN PIT SHALL BE A MINIMUM OF 10 FOOT WIDE BY 36 FOOT LONG AND BE EXCAVATED TO ACCOMMODATE AN AIR POWERED PIPE RAMMER.
2. STEEL CASING SHALL BE 54 INCH DIAMETER MEETING ASTM A-139, GRADE B SPECIFICATIONS, AND BE A MINIMUM THICKNESS OF 0.50 INCH IN ACCORDANCE WITH ODOT ITEM 748.06.
3. THE STEEL CASING WILL BE FURNISHED IN 20 FOOT LENGTHS. AS EACH 20 FOOT SECTION IS ADVANCED ALONG THE BORE PATH, CASING WILL BE WELDED ON AND ADVANCED.
4. STEEL CASING WILL BE CENTERED AROUND THE 16" ABANDONED OUTFALL LINE.
5. THE STEEL CASING WILL HAVE A CUTTING SHOE WELDED TO THE LEADING EDGE.
6. RECEIVING PIT SHALL BE A MINIMUM OF 10 FOOT LONG BY 8 FOOT WIDE AND WILL BE EXCAVATED TO ACCOMMODATE REMOVAL OF CUTTING SHOE WELDED TO STEEL CASING.
7. REMOVE 16 INCH ABANDONED OUTFALL LINE PIPE TO THE LIMITS OF THE PROPOSED 54 INCH STEEL CASING AND HAUL TO STOCKPILE SP-7.
8. PLUG, GROUT, AND SURVEY EAST AND WEST ENDS OF 16 INCH ABANDONED OUTFALL LINE.
9. RAM 54 INCH PIPE CASING AROUND 16 INCH ABANDONED OUTFALL LINE AND 26 INCH STEEL CASING.
10. AFTER COMPLETION OF 54 INCH CASING RAMMING, PERFORM RADIOLOGICAL SURVEY AT END OF 54 INCH CASING IN RECEIVING PIT.
11. REMOVE THE SOIL BETWEEN THE 16 INCH PIPE AND 54-INCH PIPE AT BOTH ENDS TO APPROXIMATE LENGTH OF 6 TO 8 FEET AND HAUL TO ON-SITE STOCKPILE SP-7. THIS ACTIVITY WILL REQUIRE APPROPRIATE PPE AND CONFINED ENTRY SPACE PERMIT. FIRST REMOVE SOIL ON TOP OF 16 INCH PIPE IN SIDE THE 54 INCH PIPE, DURING THE SOIL REMOVAL, IF PIPE JOINT/(S) IS/(ARE) FOUND OUTSIDE THE ENCASEMENT PIPE, REMOVE THE LENGTH OF PIPE OUT SIDE THE ENCASEMENT PIPE BEFORE REMOVING THE SOIL UNDERNEATH THE 16 INCH PIPE. PERFORM RADIOLOGICAL SURVEY DURING THE SOIL REMOVAL ACTIVITY. ALSO PERFORM PRE-CERTIFICATION AND CERTIFICATION SAMPLING DURING SOIL REMOVAL, AS REQUIRED.
12. PERFORM RADIOLOGICAL SURVEY OF OUTSIDE SURFACE OF PIPE LENGTH REMOVED FROM OUTSIDE OF ENCASEMENT PIPE.
13. UNPLUG 16 INCH AOL PIPE AND INSERT 12 INCH SDR 11 HDPE PIPE. BEFORE INSERTING HDPE PIPE, PLUG BOTH ENDS OF HDPE PIPE.
14. AFTER INSERTING HDPE PIPE UNPLUG BOTH ENDS. AFTER UNPLUGGING END, SUBCONTRACTOR SHALL INSERT THREADED SHAFT (SHAFT LENGTH 13 FT +/-, THREADED SHAFT CONNECTION) IN HDPE PIPE AND INSTALL END STEEL PLATE (APPROX. SAME DIMENSION AS CI PIPE BELL ID) AT THE END OF THE THREADED SHAFT BEFORE PULLING OPERATION.
15. WITH HYDRAULIC PULL EQUIPMENT, PULL 16 INCH PIPE FROM THE ENCASEMENT PIPE AND HAUL TO ON-SITE STOCKPILE SP-7. EQUIPMENT WILL BE IN MAIN PIT EASTSIDE (BY SUBCONTRACTOR). BASED ON THE EXISTING DRAWING IT IS ASSUMED THAT THE ENCASEMENT PIPE IS NOT GROUTED WITH CONCRETE OR SAND. DURING THE PULLING OPERATION, CUT HDPE PIPE LENGTH AND REMOVE THREADED SHAFT LENGTHS, AS REQUIRED.
16. AFTER REMOVAL OF 16 INCH PIPE AND SOIL IN 54-INCH CASING PIPE UP TO BOTH ENDS OF 26 INCH ENCASEMENT PIPE, PERFORM RADIOLOGICAL SURVEY OF INNER SURFACE OF THE 26 INCH ENCASEMENT PIPE.
17. IF 26 INCH ENCASEMENT PIPE PASSES THE "FREE RELEASE" CRITERIA, GROUT THE ENCASEMENT PIPE WITH CONCRETE.
18. IF 26 INCH ENCASEMENT PIPE DO NOT PASS THE "FREE RELEASE" CRITERIA, JACK/RAM OR PUSH/PULL 26-INCH ENCASEMENT PIPE AND REMOVE SOIL (BY SUBCONTRACTOR) AND HAUL TO ON-SITE STOCKPILE SP-7 (BY FF).
19. AFTER REMOVAL OF 26 INCH PIPE AND REMOVAL OF SOIL INSIDE 54 INCH CASING PIPE, PERFORM RADIOLOGICAL SURVEY OF INNER SURFACE OF THE 54 INCH CASING PIPE.
20. GROUT BOTH ENDS OF 54-INCH CASING PIPE AND BACKFILL SR 128 SIDE SLOPES AS SHOWN ON CONSTRUCTION DRAWING (TO BE VERIFIED WITH OHIO-DOT). BACKFILLING WITHIN STATE ROUTE 128 RIGHT-OF-WAY SHALL BE IN 8 INCH LOOSE LIFTS COMPACTED TO AT LEAST 98% OF STANDARD PROCTOR MAX-DRY DENSITY IN ACCORDANCE WITH ODOT ITEM 203.06 AND 203.07.
21. JERSEY BARRIERS ARE EXTENDED OUTSIDE OF THE 23 FEET CLEAR ZONE AS DESCRIBED IN ODOT DRAWING MT-95-41.
22. INSTALL TRAFFIC SIGN "ROAD WORK AHEAD" (48" SQUARE) ALONG STATE ROUTE 128 IN BOTH DIRECTIONS AT 1000 FEET FROM JERSEY BARRIERS.
23. DO NOT OPERATE TRACK EQUIPMENT ON STATE ROUTE 128, UNLESS PROTECTION MEASURES (PLYWOOD, RUBBER, MATTING, ETC.) ARE PLACED OVER THE PAVEMENT. PARKING WITHIN STATE ROUTE 128 RIGHT-OF-WAY IS NOT PERMITTED.
24. JERSEY BARRIERS ALONG STATE ROUTE 128 SHALL BE CONNECTED MECHANICALLY. THE OBJECT MARKERS SHALL BE IN ACCORDANCE WITH ODOT ITEM 720.05 AND REFLECTORS IN ACCORDANCE WITH ODOT ITEM 626 AND 720.04.
25. DISTURBED AREA IN RIGHT-OF-WAY SHALL BE RESEEDED IN ACCORDANCE WITH ODOT ITEM 659. USE CLASS 3B LOW GROWING SLOPE MIXTURE IN ACCORDANCE WITH ODOT TABLE 659.09-1. IF SEEDING IS PERFORMED IN WINTER (PRIOR TO MARCH 1) USE CLASS 7 ANNUAL RYEGRASS TEMPORARILY AND THEN CLASS 3B SEEDED IN SPRING.
26. CONSTRUCTION WATER DURING AND AFTER EXCAVATION OF MAIN PIT AND RECEIVING PIT SHALL BE DISCHARGED TO THE ACTIVE 24" HDPE OUTFALL LINE. IF TREATMENT IS NOT REQUIRED OR DISCHARGE TO FERNALD CLOSURE PROJECT WASTEWATER TREATMENT SYSTEM. IF TREATMENT IS REQUIRED.

NO.	REVISIONS	DATE	DWN. BY	APP'D.
A	ISSUED FOR AGENCY REVIEW	2/12/04	RML	

REF. DWG. NO.

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING — SYSTEMS, STRUCTURES OR COMPONENTS AFFECTED BY THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

COGNIZANT ENGINEER DATE

APPROVALS			
CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT.	
INSTRUMENT		WASTE MANAGE.	
MECHANICAL		SECURITY	
QUALITY CONTROL		PROJECTS	
CHECKED		CONSTRUCTION	
APPROVED		CHARACTERIZATION	

Fernald Closure Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

AREA 9 PHASE III
REMEDIATION OF ABANDONED OUTFALL LINE
PIPE REMOVAL UNDER ST. RT. 128

PROJECT: 2920
DATE: 10/28/2004
DRAWN: R.M. LINDGREN

99X-5500-G-00822 A

SHEET NO. G-14

FILE NAME: /osdf/Project2li20/99xg0822.dgn

FCPS.DGN 5/30/03

(APPENDIX D)

5771

Snider, Anthony

From: Fabricante, Corey
Sent: Wednesday, December 01, 2004 11:39 AM
To: Chiou, Jyh-Dong; Kumthekar, Uday; Snider, Anthony; McCormack, John
Cc: Kent, Dave; Thiel, Daniel; Fabricante, Corey; Powell, Dan; Johnson, Gregg
Subject: Steel casing under route 128

All,
Endeavors are underway for the removal of the section of abandoned outfall line pipe, which is located underneath of route 128. From a free release stand point construction has requested a radiological survey to see if the steel protective casing can be left in place after the outfall line has been removed. The history of the casing was to protect the outfall line from any settling the road might have done over the years due to traffic running over this section of line. The methods rad control can use based on Site procedures and federal regulations are as follows.
-A direct survey of the inside of the casing once the outfall line has been removed will be completed. Rad control currently has a 20 foot frisker cable and a extendable pole for access into the inside of the casing.
- During removal of the outfall line from the casing rad control will perform radiological surveys on the outside of the abandoned outfall line. The survey methods will be for fixed plus removable contamination. Primary isotopes of concern radiological control will be monitoring for will be uranium-238 and thorium-230.Rad control will follow the free release criteria listed in 10cfr835 and site procedure RP-0025.
-A free release justification could be written for this casing based on clean results from the inside of the steel casing, clean results from the outside of the outfall line, and clean sample results from any soils samples taken from the outside of the casing areas.
If any contamination is detected above the free release limits rad control will not be able to justify free release of this casing.
All survey results will be provided for the justification memo and we will reference the language used in the justification memo written for the sheet piles along the river.
I am sure there are more issues to come, this is just a start in the free release justification, for questions or comments please feel free to give me a call.
Fluor Fernald
Radiological Engineering
Corey Fabricante